Stiles Mill Site Visit

Findings

1. **Arsenic**
    a. Stockpile surface samples were all above 22ppm
    b. Stockpile subsurface were all above 22ppm, and were higher than surface samples
    c. Trail samples were only moderately above threshold
    d. Shaft was not contaminated
    e. Waste Rock surrounding the shaft was above 22ppm, with high spatial variability
    f. Background were also above threshold, but not by very much
2. **Lead**
    a. Stockpile surface samples were at or above 150ppm
    b. Two of the four stockpile subsurface were above 150 ppm
    c. Some of the trail samples were above 150 ppm
    d. Shaft was not contaminated with lead
    e. Waste Rock surrounding the shaft was above 150 ppm, with high spatial variability
    f. Background were all below threshold, except for number 40 with was by the road
3. **Cadmium**
    a. Not a problem at this site

Re-use

The trail is currently used by the homeless population but it could be made into an extension of the City's Tribute Trail system. A different access from the bridge could be constructed and a small foot bridge built across Gold Run so that people would not have to walk so near the highway to get to this scenic spot. There are very few places where the public can access the creek that runs through town and this is one that could be very nice.

Targets

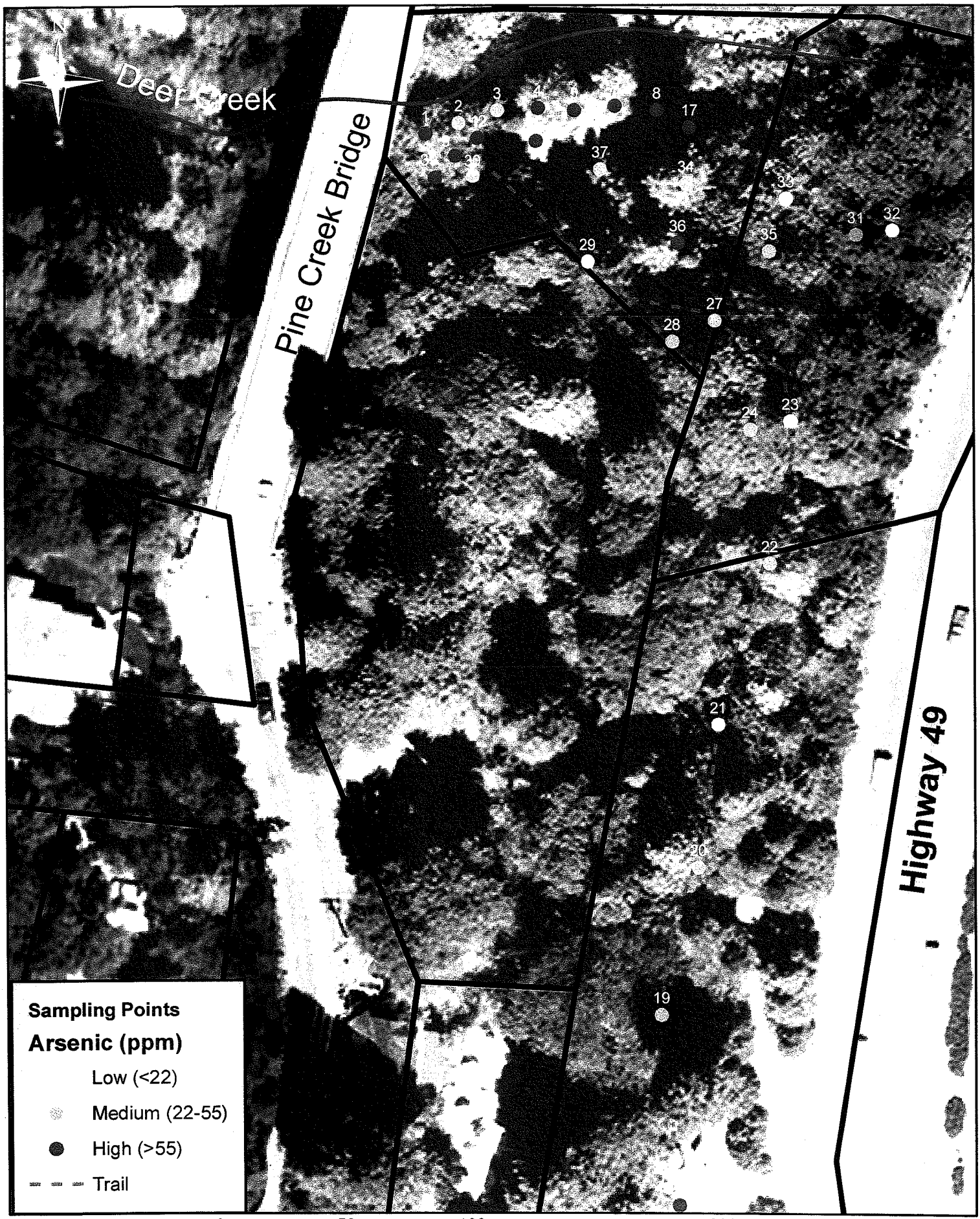
Lead would drive the clean up. The thought being if you deal with lead then you have dealt with arsenic as well and the target for lead is much less ambiguous than arsenic. The goal for clean up would be to have lead levels be below 150ppm.

Options

1. Remove the stockpile near the creek-this would have the added benefit of reducing the contamination of the river gravel
2. Create a picnic table area along the banks of the creek
    a. Grade the picnic area
    b. Cover this area to reduce contamination
3. Cover the existing trail with gravel, or concrete so that exposure to toxins would be reduced.
4. Close off the existing access trail
5. Open up access to the site from the bridge abutments on the South side of the creek

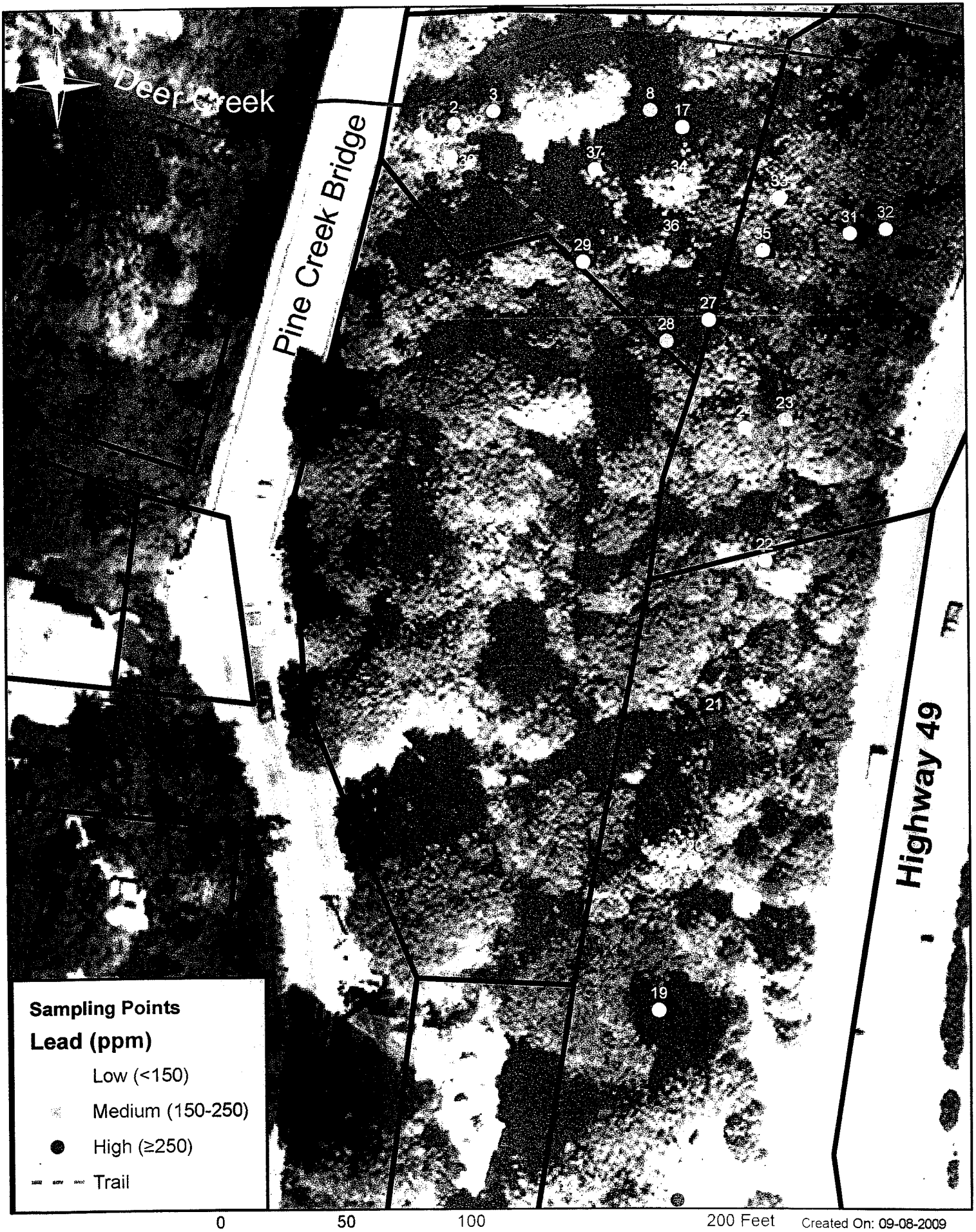
Recommendations

Stiles Mill Arsenic Assessment



Created On: 09-08-2009
Created By: Simeon Caskey and Carrie Monohan

Stiles Mill Lead Assessment



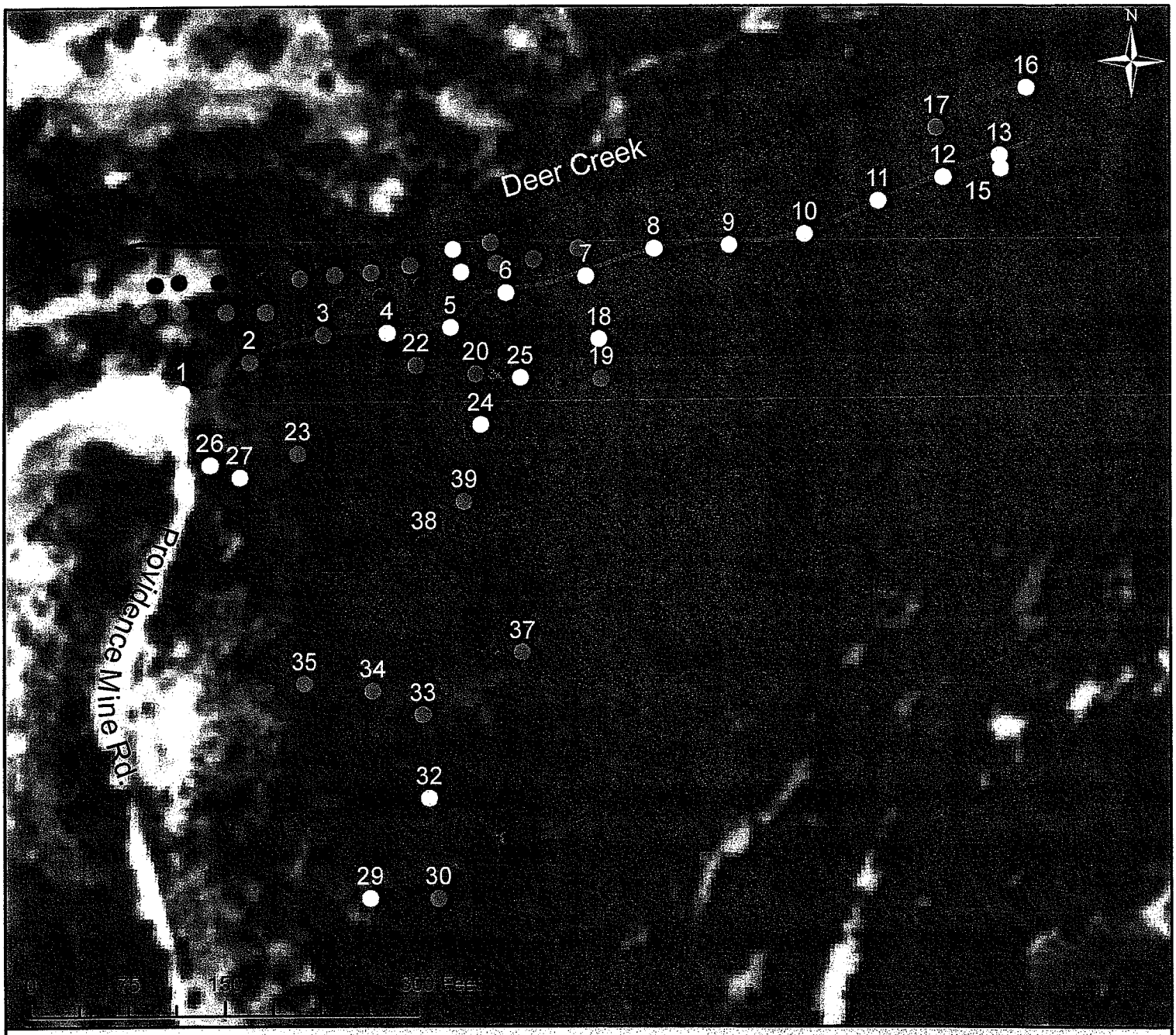
Created On: 09-08-2009
Created By: Simeon Caskey
and Carrie Monohan

Stiles Mill

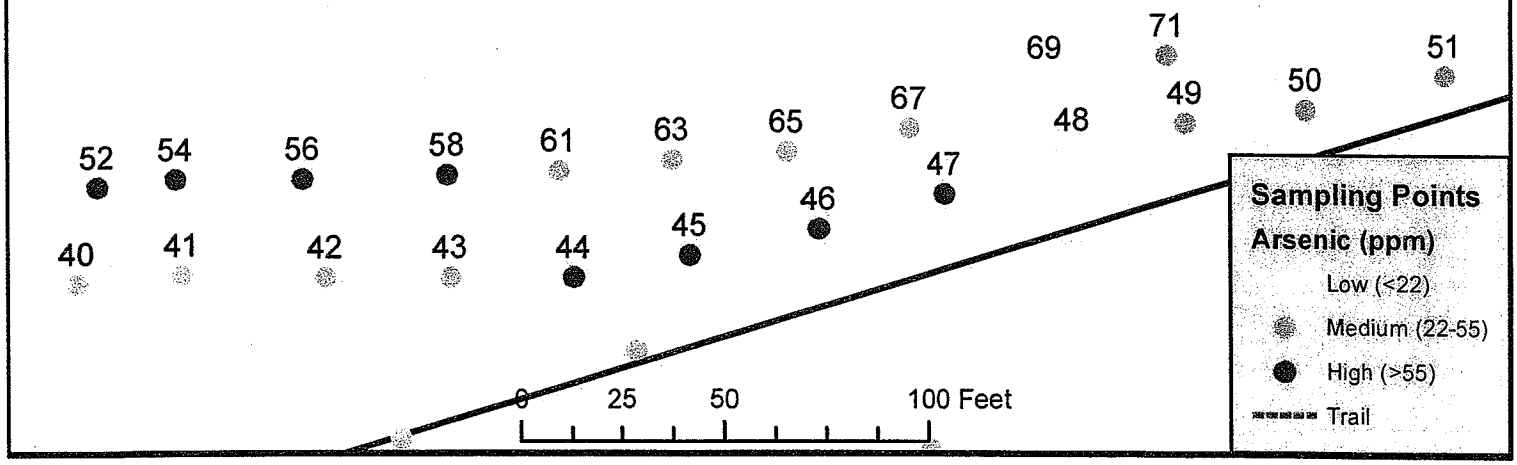
Appendix A

sample number	EPA As ppm	ALS As ppm	As ppm	EPA Pb ppm	ALS Pb ppm	Pb ppm	EPA Cd ppm	ALS Cd ppm	Cd ppm	ALS Cr ppm	Cr ppm	Location category	Location notes
1	85	102	85	150	166	150		0.7	0.7	25	25	Stockpile	river left downstream end of pile statistical surface
2	49	87	49	180	324	180	5	0.7	5	46	46	Stockpile	river left 15ft up from DS end of pile statistical surface
3	49	59	49	180	170	180	5	<0.5	5	27	27	Stockpile	river left 30ft up from DS end of pile statistical surface
4	65	69	65	200	247	200		<0.5	<0.5	29	29	Stockpile	river left 45ft up from DS end of pile statistical surface
5	65	90	65	200	174	200		<0.5	<0.5	22	22	Stockpile	river left 60ft up from DS end of pile statistical surface
6		89	89		177	177		<0.5	<0.5	24	24	Stockpile	duplicate of 5
7	70	88	70	190	196	190		<0.5	<0.5	21	21	Stockpile	river left 75ft up from DS end of pile surface statistical
8	70	79	70	190	196	190		<0.5	<0.5	30	30	Stockpile	river left 90ft up from DS end of pile surfcae statistical
9	81	89	81		140	140		0.5	0.5	49	49	Stockpile	river left downstream end of pile judgemental surface
10	82	95	82	140	153	140		<0.5	<0.5	47	47	Stockpile	river left downstream end of pile judgemental below 6 inches
11		102	102		163	163		0.6	0.6	46	46	Stockpile	duplicate of 10 (below 6 inches)
12	86	101	86	250	254	250		<0.5	<0.5	36	36	Stockpile	river left 25ft from DS end of pile on slope judgmental surface
13	88	110	88	250	278	250		<0.5	<0.5	34	34	Stockpile	river left 25ft from DS end of pile on slope judgmental below 6 inches
14	130	144	130	240	268	240	1.2	1.7	1.2	25	25	Stockpile	river left 59ft up from DS end of pile on trail down judgmental surface
15	130	154	130	190	203	190		<0.5	<0.5	26	26	Stockpile	river left 59ft up from DS end of pile on trail down judgmental below 6 inches
16		133	133		176	176		<0.5	<0.5	20	20	Stockpile	duplicate of 15
17	61	74	61		131	131		<0.5	<0.5	11	11	Stockpile	river left 109ft up from DS end of pile judgement surface
18	87	96	87		129	129		<0.5	<0.5	13	13	Stockpile	river left 109ft up from DS end of pile judgement below 6 inches
19	46	50	46		119	119		0.7	0.7	142	142	Trail	top of the trail judgemental surface
20	46	74	46		105	105		0.6	0.6	131	131	Trail	50ft down from the top of the trail surface judgemental
21	15	25	15	250	299	250		1	1	138	138	Trail	100ft down from the top of the trail surface judgemental
22	51	63	51		144	144		0.7	0.7	175	175	Trail	150ft down from the top of the trail judgemental surface
23	16	25	16	220	242	220		1.2	1.2	117	117	Trail	200ft down from top of trail judgemental surface
24		36	36		40	40		<0.5	<0.5	396	396	Background	Background 1 off the trail at 200ft down from the top of the trail, surface statistcal
25		41	41		143	143		0.6	0.6	35	35	Background	Background 2 on the trail at 200ft down from the top of the trail, surface statistcal red dirt
26		41	41		26	26		0.5	0.5	194	194	Background	Background duplicate of 25 surface statistical
27	27	41	27		37	37		0.5	0.5	199	199	Trail	250ft down from top of trail judgemental surface
28	40	47	40	210	211	210		1	1	110	110	Background	top of the trail Background 3 surface statistical
29	20	26	20		115	115		0.7	0.7	48	48	Trail	300ft down from top of the trail judgemental surface
30	52	64	52	300	330	300	1.3	1.7	1.3	157	157	Trail	350ft down from top of the trail @ benches surface statistical
31	37	51	37		126	126		0.8	0.8	19	19	Shaft	mine shaft sample surface statistical
32		5	5		16	16		<0.5	<0.5	8	8	Shaft	above shaft surface statistical
33		8	8		12	12		<0.5	<0.5	30	30	Waste Rock	waste rock 1 outside of shaft surface statistical
34	32	34	32	79	90	79	0.5	<0.5	0.5	24	24	Waste Rock	waste rock 2 on slop towards shaft surface statistical
35	32	55	32	79	72	79	0.5	0.5	0.5	39	39	Waste Rock	waste rock 3 on slop toward creek exposed surface statistical
36		112	112	280	304	280		1.4	1.4	11	11	Waste Rock	waste rock 4 exposed area under tree surface statistical
37		41	41		118	118		1.2	1.2	28	28	Waste Rock	waste rock 5 exposed areanearest to bench site surface statistical
38	87	178	87	250	263	250		0.7	0.7	11	11	Waste Rock	duplicate of 37
39		199	199	260	264	260		0.6	0.6	11	11	Waste Rock	inland side of pile surface statistical
40	99	111	99	300	317	300		1.1	1.1	27	27	Background	on road above the trail surface statisitical

Providence Mine Arsenic Assessment



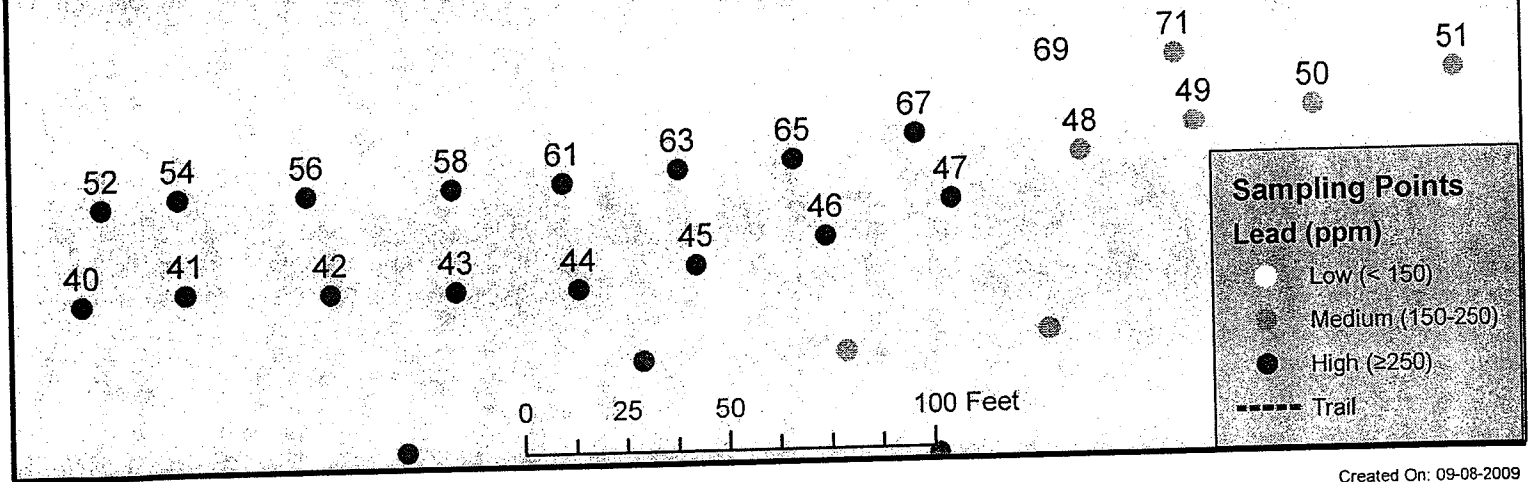
Tailings Inset



Created On: 09-08-2009
Created By: Simeon Caskey
and Carrie Monohan

Providence Mine Lead Assessment

Tailings Inset



Created On: 09-08-2009
Created By: Simeon Caske and Carrie Monohan